CAB Adopts Changes to Facilitate Movements of Increased Traffic

THE AIR LINE PILOT

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UNIVERSITY OF LOUISVILLE AUG 30 1941

Eastern Air Lines Signs Employment Agreement With Its Pilots

—American Airlines Photo

"V" FOR VICTORY **The victory campaign which swept through the occupied countries of Europe made its first appearance in the skies over the towering buildings of New York when five giant American Airlines Flagships roared in the shape of a tight letter "V." Number one position was flown by R. L. Mitchell, Assistant Operations Manager of American Airlines. Not bad, "Mitch," not bad at all. The flight was not only intended as a tribute to the British victory campaign, but also to spur the campaign for the collection of aluminum for the National Defense.**

Major Air Traffic Rules Amended

The Civil Aeronautics Board recently adopted two momentous and far-reaching amendments to the Civil Air Regulations in the interest of safety and National Defense. These amendments are designed to facilitate the movement of military aircraft as well as to provide greater safety on the airways in the face of the enormous increase in civil and military air traffic now taking place.

Must be Equipped with Radio

Specifically the amendments will require that as of July 1 all aircraft operating on the civil airways between altitudes of 3,500 feet above the ground and 17,000 feet above sea level must at all times be equipped with a radio receiver, a radio transmitter, and a sensitive type altimeter. Observance of these regulations does not require a pilot to hold an instrument rating except when flying under instrument weather conditions. When entering an area under the jurisdiction of a U. S. Airway Traffic Control Center, the pilot must file a flight plan. In addition, all aircraft flying between 3,500 feet and 17,000 feet on civil airways must maintain specified altitudes, depending on the direction of flight, to effect safe separation between aircraft.

The CAB also designated the air space above 17,000 feet for military operation, except for special authorized commercial operations

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15 Contracts Consummated

The making of working agreements covering rates of pay, rules, and working conditions under title II of the Railway Labor Act with domestic air carriers is rapidly nearing completion.

The one remaining operator that has not yet signed a pilots' working agreement is National Air Lines, with headquarters at Jacksonville, Fla. Negotiations were started a number of months ago. After several conferences a deadlock was reached, and the services of the National Mediation Board were invoked on April 26. The first mediation conference was held in the offices of the Board in Washington on June 14 to 17.

TWA Hearings Intervene

These meetings were adjourned because of the intervening TWA Boeing Stratoliner hearings which started in Kansas City on June 23. Conferences will shortly be resumed with National for the purpose of completing the sixteenth and last agreement between the domestic air carriers and the Air Line Pilots Association.

G. T. Baker, President, represented the Company during these conferences, and the pilots' representatives were J. M. Gilmour and C. H. Ruby. Other activities during the past month include the completing of an agreement with Eastern Air Lines. This contract was signed in Atlanta on July 23.

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LATE NEWS IN BRIEF

Ford

The Ford Motor Company has disclosed that its original order for Pratt & Whitney 2,000-horsepower aviation engines has been increased from 4,200 to a total of approximately 10,000.

Vengeance

"I christen thee Vengeance—newest 'V' in Britain's campaign for victory," said Lady Halifax, wife of the British ambassador, as she smashed a glass wand of oxygen across the propeller hub of a new dive bomber in a ceremony at the Vultee aircraft plant in Downey, Calif.

Expansion

United States air line service is expanding rapidly. Harold J. Roig, President of Panagra (Pan American-Grace Airways), reported passenger miles flown in the initial 1941 quarter were 106 per cent greater than in the same 1940 period, with the number of passengers up 75 per cent.

Honolulu

Pan American Airways doubled its air service to Honolulu this month. Scheduled is one weekly flight each between Los Angeles and Honolulu, and San Francisco and Honolulu, and a flight alternate weeks between the two coast cities and the Hawaiian Islands.

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Flight Delivery Service Backfires

It appears that, due to certain misunderstandings, the salaries originally expected for pilots ferrying American-made airplanes over the ocean to England are not materializing.

Originally, the salaries and bonuses that American volunteer pilots were led to believe were being paid for this type of flying were $1,500 per calendar month with $2,500 bonus for each ten round trips to Britain and $5,000 additional for each 25 trips.

Several weeks ago complaints were made by pilots who had volunteered for transatlantic ferry flying that the salaries expected were not being paid by Atfero. Further investigation revealed that the original offers had evidently been withdrawn and the amount that is now being paid for transatlantic ferrying is $1,000 per month for first pilots, $800 for copilots, and $100 a week while undergoing instructions prior to assuming regular duty. The requirements are not less than 750 hours and the ability to handle multi-motor equipment. The pilots employed in this service must also have instrument ratings.

Air Lines Seek 250 Planes

The country's 19 domestic air lines are renewing their attempt to prevent the administration from taking more of their air liners for British service with a demand for at least 250 new commercial planes of large size for delivery during

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12 Trained in Glider Courses

Twelve Air Corps officers have completed a three-week course in flying gliders and soaring planes, the War Department announced recently. The 12 pilots received their training at the Frankfort-Lewis School of Soaring at Lockport and at the Elmira Gliding School in New York.

This special training is being carefully studied by the Army Air Corps in regard to investigating the possible use of large troop and supply-carrying gliders.

CAA authorities state that experience at the civil glider base at Elmira indicates that it requires an average of three weeks to put even an experienced airplane pilot through glider training sufficient to qualify him for a "C" certificate. This certificate requires a soaring flight of at least five minutes' duration above the point of release.

The courses at the two schools consist of 30 hours of flying, investigating automobile and winch launchings, thermal soaring, aircraft towing, and cross-country soaring.

QUALIFIED ***Dick Merrill, Transatlantic flier and EAL captain, recently purchased a Silvaire airplane for his personal and business use. Although Dick has had many thousands of hours in the air in larger equipment, he had never flown a small plane. Before starting for his home in Miami from the Luscombe Airplane Corporation's West Trenton plant, it was necessary for Merrill to check out. The veteran pilot approached his new purchase in the same manner as a tenderfoot approaches a bronco. He managed to accomplish the feat of piloting a small plane in 20 minutes. Remarkable is the word. Maybe Dick is planning a "One Way Corrigan"—if so, we advise against it.***

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Editorial Offices:
3145 W. 63rd St., Chicago, Ill. Telephone Hemlock 5015

David L. Behncke ..... Editor *Olive Barnes ..... Asst. Editor*

WINDSHIELDS

In an editorial published in the February, 1941, issue of the AIR LINE PILOT, the following appeared:

"Let's try to understand the underlying and basic problems of air safety, recognize *all* the contributing causes of an accident, establish *all* the contributing causes, and eradicate them. Why not begin with the very simple ones? For instance, give the pilot who is always to blame a precipitation-free windshield so he can see to land his craft under conditions of low visibility in bad weather without serious vision impairment."

As far back as early in 1936 the problem of removing ice and other precipitation from air liner windshields was extensively discussed before the Copeland Senatorial Air Safety Hearings. Here is a page from the records:

"Mr. Behncke: 'When this happens the pilot finds himself flying on the instruments with no means of looking out, unless he deliberately breaks the window or manages somehow to open a side window slightly and scrape the ice off of the forward glass with his finger tips or with a scraper that some of them carry for this purpose.

"'Imagine the hazard of a pilot flying low through bad weather, especially in mountainous terrain, with the windows completely iced up, making visibility impossible where a split second may mean the difference between safety and a terrible accident.

"'Imagine the hazard involved when the pilot reaches his destination, where there are other ships flying around the airport which must be avoided, remembering that ships now normally travel at a speed of 150 miles an hour or more.'

"Senator Copeland: 'You mean to say there is no provision made now for that sort of thing?'

"Mr. Behncke: 'No, sir; there is not.'

"Senator Copeland: 'I know I have been terribly embarrassed in automobiles about the ice on the front window, and I suppose of course that airplanes ought to have some device to keep the ice off of the windshields. Has there been anything done about it?'

"Mr. Behncke: 'No, sir; there has been nothing definitely done about it, but I certainly think there should be. I think some uniform design should be provided for windshields, some heating apparatus that would prevent the ice from forming on the pilots' windshields.'

"Colonel Gorrell: 'May I make another statement?'

"Senator Copeland: 'Yes.'

"Colonel Gorrell: 'At this same meeting I referred to, we gave the Government a list of 14 problems, and the windshield, I think, was included in that. That has not been solved, but the Government is working on the whole problem of icing: ice in the carburetor, ice in the windshield, and on the wings.

"'We have been dependent in this country on American research only until the last few years, because for some reason the foreign governments could not appreciate the ice problem, and we could not get any help from the foreign institutions at all until two or three years ago, but they are now working on it.

"'This whole question of ice is a serious one, and the Government has decided to intensify all of its research in all of the bureaus on it, in addition to what help we can get on the outside.'

"Senator Copeland: 'I hope the committee may take some pride in the fact that things are being done now. We hope that some of these things have been the result of our efforts, but whether they are, I cannot say.'

"Colonel Gorrell: 'Along that particular line I was going to ask you later on to give some attention to some equipment we need in the Government bureaus to do this work, because they are somewhat shy in their equipment.'

"Senator Copeland: 'Nothing pleases me so much as to go before the Appropriations Committee when I have a good case. You may go ahead, Mr. Behncke.'

"Mr. Behncke: 'Pilot Kincannon was one of the victims who very recently lost his life through the hazard of icing conditions.'

"Senator Copeland: 'It seems to me that it should not be difficult to do something about that, and I am amazed there has not been some device perfected.'

"Mr. Behncke: 'It is just a matter of making a study and concentrating efforts, and when we get something that actually works we ought to make it a regulation, or, better still, a law providing that it should be put on all interstate passenger-carrying equipment.'

"Senator Copeland: 'This is not a new problem, is it?'

"Mr. Behncke: 'No, sir. As a matter of fact, it is a very old one.'

"Senator Copeland: 'Whose business is it to see that there is some investigation made?'

"Mr. Behncke: 'I do not know, sir; but as far as the pilots are concerned it is just a matter of kicking about things like this in the sincere hope that something constructive will be done. That's about all we can do.'

"Senator Copeland: 'Is there resting upon the Government at this time an obligation to try to find some way to make aviation safer in this respect?'

"Mr. Behncke: 'I think there is a very definite obligation on the shoulders of our Government to make air travel safer in all respects, but the whole picture is, at present, too loosely connected. In other words, we develop something in one place that works, but there has been no concerted effort to make it uniform and to put it on all the equipment. In other words, we develop things that would improve safety and usually forget about them soon thereafter.'"

Five years later we find this problem is still approximately in the same status—unsolved. It is still being kicked about with little prospect of an early solution.

ALPA has recommended that the CAA designate one of its technical staff to correlate all the efforts that have been made by various carriers, agencies, and individuals for the purpose of arriving at the best method now available to remove ice and other precipitation from air liner windshields.

Winter will soon again be upon us. Let's beat the rapidly approaching bad weather to the draw and do something definite and uniform about the windshield bugaboo now. Remember it's better to be smart than sorry.

—*David L. Behncke*

DUNDER AND BLITZEN! THINGS HAPPEN FAST!!

By FRED W. WAHL
Council No. 21, IAL
Cheyenne, Wyo.

Dunder and Blitzen! Things have happened and are happening so fast that Hitler and his Blitz are like a rheumatic old pilot running after a fire.

All of our ports on the Cheyenne-Great Falls run are under construction. They have been camouflaged so completely that even the guys who try to get in and out daily cannot give you a description. It's nothing to have one ditch filled and another opened on the one and only runway available, while the jeep is in the station working the 2702. At night it is so baffling that we have decided the Army is all wrong trying to hide airports. We suggest sending them out in this region to learn how to fool the enemy and account for swarms of aircraft—without firing a single shot.

Prefers More Adventurous Type of Life

R. V. (Bob) Garrett has forsaken the calm and uneventful life of an aerial bus driver and taken to something with more of the adventurous type, as portrayed in pulp. By now he probably is somewhere over the Atlantic flying bombers for Britain. We miss your poker-faced jokes, Bob, and sincerely trust that your new position is everything you had hoped it would be. In the meantime I'll keep an eye open on that south forty and the cattle. One of the last things Bob did before leaving was to buy a ranch at Sheridan, Wyo. His reason for purchasing this ranch was to provide a haven for broken-down air line pilots. They could come here in their declining years to listen in on air line frequencies and gripe about this'n that.

Our new added schedule to Huron, S. D., which started July 15, is keeping Sam Moser, chief pilot, as busy as a cat on the proverbial roof. He has finished getting Paul Seal and Lee Osborn checked out and comfortably nailed down on the left side. Merritt Gano was the last victim to go over the hurdles for Sam and to be thrown at the gentlemen with that gleam in their eyes.

"Gear Up, Gear Down" Mysteries Explained

When Sam is not checking would-be captains, he is initiating new first officers into the mysteries of "Gear Up, Gear Down. I didn't wave at you; that means do you have a wheel on your side."

The following new faces appeared during the last few weeks:

Marvan Vaughan from St. Joseph, a jolly, well-fed chap with a ready smile, who seems like a regular guy. Welcome to the ranks.

Charles Metcalfe is the next one and hails from up Montana way. Chuck is better known in them thar parts as "Gear Down, Met." Have not had the privilege of meeting him yet. This pilot list is getting too big for us country boys, but reports are that he also is regular. Welcome, pal.

New Victims for the Puddle Jumpers

Last but not least, as yet, others to come soon include Has Bailey, who also is from Montana. He formerly was CPT instructor for Paul Tarrant and will now have a chance to see how it feels to be cut off by those puddle jumpers around that field. Oh yes, he

(Continued on Page 7, Col. 3)

The Law Gets "Leather Neck"

By JOHN H. CATCHINGS
Council No. 39, AA
Chicago, Ill.

In one of the suburbs of this great city is a street known to the natives as Poverty Row. Among neighbors of questionable character and pursuits lived our hero. "Leather Neck" Claude he was called by his pals because no rope as yet had put an end to his nefarious schemes. The lynchers had only succeeded in stretching him out to 6-foot 3½-inches.

Now Leather Neck knew the long arm of the law was looking for him and that a Texas deputy sheriff was around about, so he had been lying low for awhile, trying not to antagonize the local authorities. But he had reckoned without the evil intents of "Pinky" Lindsey, a rival toughy who had sworn to muscle in on Leather Neck's Ladies Protective Assn.

Finds Getaway Car of Our Hero

"I'll fix that guy so he'll get tossed in the klink," muttered Pinky into his glass of pink lemonade. Waiting until darkness hid his movements, he stealthily crept to Leather Neck's hangout and proceeded quickly to the garage, where he found the getaway car of our hero. Calling into play his powerful stomach muscles, Pinky quietly rolled the car out of the drive and left it parked so that the street was completely blocked. Satisfied his plans would work out, he quickly took it on the lam to his dump to lay low and watch the fun.

Sheriff Susott was snoring peacefully away when the phone rang.

"This is the Chief of Police. I think we got the goods on Laughing Laurens alias Leather Neck. He's got 14 milk trucks held up. I'll get Prosecutor "Blaze" Clark right away, and if we work fast we can catch Leather Neck with his pants down."

Puts Plenty of Slugs Into the Sheriff

"The jiggers you say, Chief," replied the Sheriff. "That guy has put plenty of slugs into me, and I'm ready to bottle him up. He'll hafta dig up a lotta bond while he's trying to proof he's innocent."

With lightning speed the minions of the law surrounded the hangout of Leather Neck.

"I just read in a book," whispered Sheriff Susott, "that the federal men catch them while they're sleeping. It seems they're weak and willing when you get 'em in bed."

Snores Vibrate House

"He's asleep now," replied the chief. "Don't you feel the house vibrating? Let's go."

"You guys got nothing on me," challenged Leather Neck. "As a matter of fact I got nothing on myself, see? Let's go out by the icebox and talk this over. I wanta get Judge Charles Allen, my mouthpiece, over here before I open up."

The jury foreman, a fisherman named Hack, rose unsteadily, burped twice, and read the verdict. "We, the jury, are charged (burp), that is we charge the ac-

(Continued on Page 3, Col. 4)

Mama Doing Fine, Papa Fails to Rally

The F. H. Smiths have a daughter, Janet Rachel, born August 6.

As CAA Chairman Fred Smith puts it "while mother and babe are doing very well, yours truly sure as hell isn't."

The records of ALPA show that we have never lost an air line mother because of a blessed event, but the fathers — well, we have never actually lost any but, whew, several times it's been plenty close.

"To fly West, my friend, is a flight we all must take for a final check."

In Constant Memoriam

Active

Accidental

Adams, John B.—U. A. L.
Anderson, Lloyd—U. A. L.
Andert, Paul A.—U. A. L.
Barron, John M., Jr.—A. A.
Bickford, L. A.—Panagra
Bigelow, Ed.—U. A. L.
Blom, Edwin W.—U. A. L.
Bogen, W. L.—W. A. E.
Bolnet, Frederick L.—T. W. A.
Bolton, Harvey F.—T. W. A.
Bontrager, C. M.—R. A. L.
Borchers, Adrian—P. A. A.
Bowen, J. E.—T. W. A.
Bowen, Lewis L.—B. A.
Brandon, James L.—U. A. L.
Briggs, Francis W.—A. A.
Broughton, D. E.—U. A. L.
Brunk, Paul S.—P. A. A.
Bucher, Charles L.—P. A. A.
Chamberlain, Cassius B.—N. W.
Cohn, Hanley G.—W. A. S.
Cope, Alonzo—Marine Airways
Cox, Floyd—Ludington
Davis, Alfred W.—U. A. L.
Davis, Douglas—E. A. L.
DeCesare, Frank—Panagra
De Cesaro, Joseph G.—U. A. L.
Dietz, Stuart G.—E. A. L.
Dixon, Andrew, Jr.—D. A. L.
Dunn, Stephen—Panagra
Fey, Howard—U. A. L.
Fields, Glenn T.—A. A.
Fuller, Ray E.—A. A.
George, Hal—T. W. A.
Grover, R. Boyd—U. A. L.
Hald, Arthur A.—N. W.
Hale, S. H.—E. A. L.
Haligren, W. A.—A. A.
Hill, George W.—A. A.
Holbrook, Clyde M.—A. A.
Holsenbeck, W. M.—P. A. A.
Jamellier, Stanley E.—C. A. L.
Jamieson, W. L.—E. A. L.
Jones, Lloyd E.—U. A. L.
Kelsey, Harold J.—A. A.
Kincanon, Ted N.—A. A.
King, George B.—P. A. A.
Komdat, Albert C.—E. A. L.
Lewis, Harry C.—T. W. A.
Livermore, Joe—N. W.
Lucas, Al—W. A. S.
Lucas, Verne—Ludington
Lynn, John B.—C. & S. A. L.
McMickle, Harold—Panagra
Malick, Forrest E.—U. A. L.
Mamer, Nick B.—N. W.
Marshall, Gerald V.—A. A.
Merrifield, Austin S.—U. A. L.
Montee, Ralph—T. W. A.
Montijo, John G.—V. A. T.
Morgan, Howard R.—T. W. A.
Mossman, Russell C.—C. & S. A. L.
Neff, Harold—U. A. L.
Noe, Earl J.—T. W. A.
Norby, Raymond B.—N. W.
Odell, M. T.—A. A.
Owens, Clifford P.—W. A. E.
Paschal, A.—P. A. A.
Perry, J. A.—E. A. L.
Person, Addison G.—P. A. A.
Potter, Norman W.—U. A. L.
Pursley, C. H.—Panagra
Radoll, R. W.—U. A. L.
Riggs, Russell S.—A. A.
Robbins, Wm. J. B.—A. A.
Rose, John A.—K. L. M.
Rousch, Chas. W.—N. W.
Rust, F. H.—A. A.
Salisbury, Hervey M.—T. W. A.
Sandblom, J. V.—C. P.
Sandegren, Thomas E.—U. A. L.
Saucedo, J. M.—P. A. A.
Scott, P. T. W.—T. W. A.
Scott, Philip C.—U. A. L.
Scroggins, Lowell V.—P. C. A.
Sharpnack, J. W.—U. A. L.
Sheets, Don W.—Panagra
Sherwood, George C.—W. A. E.
Supple, Robert E.—Panagra
Tarrant, Harold R.—U. A. L.
Terletzky, Leo—P. A. A.
*Thomas, L. E.—E. A. L.
Thompson, A. R.—U. A. L.
Underwood, Sanford L.—A. A.
Vance, Claire K.—U. A. L.
Waldron, Joe—A. A.
Walker, M. A.—P. A. A.
Wallace, Clyde W.—T. W. A.
Weatherdon, Edwin—A. A.
West, F. W.—N. W.
Wieselmayer, Otto—P. A. A.
Williamson, P. B.—E. A. L.
Worthen, John A.—W. W.
*Wright, J. S.—T. W. A.
Young, George S.—U. A. L.
Zeier, Carl F.—C. & S. A. L.

Natural

Blomgren, Lloyd I.—A. A.
Cochrane, Robert M.—U. A. L.
Fife, John A.—C. A.
Hohag, R. J.—N. W.
Jamieson, Leland S.—E. A. L.
McConaughey, Ira M.—A. A.
Phelps, Henry T.—P. A. A.
Swanson, Axel—A. A.

Inactive

Anderline, Frank W.; Ashford, Ted; Barr, Julius; Burford, Dean W.; Caldwell, G. Q.; Drayton, Chas. M.; Hulsman, Herbert W.; Judy, H. B.; Kerwin, J. J.; Noyes, Dewey L.; Ormsbee, F.; Riddle, Glenn L.; Roulstono, J. J.; Rousch, Usher E.; Shelton, Boyd M.; Stark, Howard C.; Trimble, W. L.; Veblen, E. H.; Walbridge, Donald C.; Wheaton, Harold H.; Whittemore, Fred W.; Wolf, John F.; Willey, Sidney L.

Waiting List

Brock, Wm. S.; Kiser, Daniel.

Unemployed

Darby, James E.; Downs, Lloyd; Hays, George L.; Keadle, Floyd E.; Rhiner, L. H.

Honorary

Greene, Dr. Ralph; Rogers, Will.

* Apprentice Member.

Three Days in Lost and Found

By W. E. HINTON
Council No. 22, AA
New York, N. Y.

It is an old but very true adage that says you are the most lonesome when you are alone in a big crowd. New York has the largest pilots' base in the country, but when one sets out to gather a little news he certainly does get lost in the crowd. The last time I sat for three days in the lost and found department, and finally Little Chiefie claimed me.

"Little Flower" opened the "V" for Victory drive with his usual aeronautical flare, and all the papers showed a very fine five-ship formation over Manhattan. It is not often that a single formation is manned by such prominent pilots as this one was. In fact the five think it was all a mistake because they looked so good Uncle Sam might decide to hire them for demonstration purposes. Leading was Flight Commander Warren (Big Chief) Vine, with Wing Commander Tommy (Little Chief) Boyd and Johnny (Little Chief) Davidson. Robie Robinson and Little Mitch Mitchell brought up the rear. Bill Miller was in the unseen ship with the camera men.

All He Got Was Prop Wash

When he was in New York the other day, Wayne Allison, one of the visiting firemen from Boston, spun a yarn that kind of makes you wonder. It was shortly after the Army claimed ownership to several of our DC-3's that W. A., en route to Boston at 5,000 feet and cruising at all the allowable boost the chart would grant, noticed a ship overtaking him. As the ship passed, it was easily recognizable as one the Army had just acquired from us. Not to be daunted, Allison raised his power up to 601 horses, but all he got was prop wash. The Army was cruising with at least 43 inches. About five miles ahead the Army pulled a long power stall and let it fall off for a couple of turns of a spin. Our schedule passed over them and kept on its way, but not many minutes later the Army passed them again and kept right on going out of sight. It seems as if the Air Corps still has just two positions for the throttle.

Duffy, Philip, and Gillin have left our fold for awhile to bolster up the Navy. That makes six since July 1, but news from the front says there will be no more taken for "at least sometime."

Cheaper to Buy Than Pay Up Back Rent

Harry Fanning has been commuting to work from the hospital where his wife has been dangerously ill for sometime. We are glad they are both home again, and that Mrs. F. feels better every day.

George Shoemaker has decided it is cheaper to buy than pay up the back rent. He has joined the class of the landed gentry. O. K. Lawing also has joined the Wilston Park assemblage. Augie Keim moved to Gann's country in Rockland County. Duke Ledbetter took up where Augie left off in Glen Cove. Rocky Kent has divorced Sid Robbins and has taken himself to Greenwich to become a Connecticut Yankee.

Fair warning to you huskies! If Ernie Gann gives you the once over, don't let it annoy you too much. He simply is looking for a powerful crew for his new boat—a 40-foot, 26-ton friendship sloop. He intends to do a little serious fishing as soon as the new rigging is installed, and any of you fishermen able to pull up an anchor might be welcomed guests. Dan Henry claims he can beat any of the windjammers with his sailing canoe—as long as they race down wind. Flushing Bay is still keeping Klasmeier afloat.

That Was No Steak, Only a Mis-Steak

Bill Dum has not done so well this year. He won too many cups last year and consequently was disqualified in his first two starts this season. Maybe that is why he decided to try for tuna and managed to haul in a 35-pounder. Squabby Vine claims Bill sent him a steak, but it was so small it was almost a mis-steak. Dan Machlin fished in the honors this month with three 35 and one 25-pound tuna and a flock of bonita. Put your name on Dan's list if you like to eat fish. His horn was scarcely big enough to give away all that he brought in last time.

Rocky Kent has had the honor of being asked to be a member of the newly formed Electrical Altimeter and Marker Technical Committee. A good man for a good job, but now we need someone to fill the vacancy he leaves as Safety Representative.

Low Ceilings Keep Stork on Nest

The Dave Coopers have a new baby, and all accounts indicate that it is a boy. Low ceilings and poor visibilities seem to have kept the stork on its nest most of this month.

Random Radios: (We are not sure, but we have reason to believe it was Peck's Bad Boy Gann.)

"N. Y.—'N. Y. to the ship testing at BJ, give me a count please.'

"Gann—'One!'

"N. Y.—'N. Y. to the ship at BJ, make it a long count!'

"Gann—'One, two!'

"N. Y.—'Aw — alright' (disgusted)."

We had a party. A dinner dance and buffet. It was held August 23 in the Knickerbocker Yacht Club at Port Washington. The committee included Ledbetter, Shoemaker, Hinton, and Gann, but it was everybody's party — the first we had attempted. A good time was had by all.

TROPHIES AND THEY WILL NOT BE WON BY CARRYING ON IN THE ROUGHS, TRAPS, ETC., ETC., LIKE A FARMER KILLING A SNAKE WITH A PITCHFORK HANDLE. TO WIN THESE TROPHIES WILL NECESSITATE SHOOTING A GOOD GAME OF GOLF. SAYS SCRIBE JOHN H. CATCHINGS OF COUNCIL NO. 39, AMERICAN AIRLINES, "YOU DON'T HAVE TO SEND IN ANY BOX TOPS TO WIN THESE HANDSOME TROPHIES. ALL YOU NEED IS A SMALL BALL, A BEATER, AND THE ABILITY TO OUT TALK YOUR OPPONENT."

CAB Establishes Air Lane Zones

The immense increase in civil and military use of the air has made imperative the zoning of air space by the Civil Aeronautics Board.

Since July 1 lanes have been separated on the basis of altitude. Levels above 17,000 feet are reserved for the military services, while those below 3,500 feet remain free for miscellaneous, civil, and private flying. The commercial users of the airways must fly between these two levels.

Tourney Open to All Says Scribe

The first Air Line Pilots Open Championship Golf Tournament in Chicago gets under way this month at Timber Trails Golf Club. Players are limited to pilots and copilots only, and the entire proceeds from the entrance fees of $3.00 each goes into trophies and other prizes.

Everyone has an equal chance regardless of his game as all players will be carefully handicapped. Whether you shoot in the low seventies or over a hundred, you have the same chance on the top prize to say nothing of all the other good prizes.

The More the Merrier

The more fellows who participate the better the tournament, and the more fun we'll all have, so don't be bashful. Come on out and join the gang. Here's how it works! Before September 1 each entrant must have played a minimum of five games at Timber Trails in order to establish a fair handicap. The average of your five best games will be taken, and you will be handicapped at 80 per cent of that average. The entrance list closes August 25, and the $3.00 entrance fee must be posted at that time.

Allen Baker, the genial Pro and host of the tournament is listing entrants, accepting fees, and arranging handicaps, so be sure to see him or his assistants when playing. Remember to turn in scores.

There Are Many Prizes

Pairings for the first round of play will be made September 1. The only losers will be the ones who drop their first match as there are prizes from then on. The tournament will be conducted under the rules of the Western Golf Association and Timber Trails Local Rules. Also winter rules govern, but this doesn't mean that Jack Gibson and Roger Ray can tee 'em up in the rough.

So far about 30 fellows have signed up and many have already established their handicaps. A glance over the Poop Sheet indicates Bob Greenlee and Ray Allemang are shooting fair golf for decrepit old men. "Poor Motor" Archie Harry Clark is taking a lesson every day and will be a serious threat when he is able to sink 18-inch putts consistently.

Come on out, fellows. The course is in fine shape, and we have to get in those five games so we can begin to commence.

It's About Four Miles Down the Road

Timber Trails Golf Club is about four or five miles south of Western Springs on Plainfield Road just west of Wolf Road. No unusual navigating ability is necessary to locate it. You'll be able to hear Pie Swanson yelling down in the woods.

288 Projects Are Approved by CAA

Construction or improvement projects on 288 airports in the United States, approved by a board consisting of the Secretaries of War, Navy, and Commerce as necessary to the national defense, were announced today by Brig.-Gen. Donald H. Connolly, head of the Civil Aeronautics Administration, which will have charge of the work.

The locations announced today involve a total estimated expenditure of $80,810,110, of which $53,409,800 will be spent on 26 locations in the initial program, but not yet placed under construction, and 149 new locations in the continental United States. "New" locations mean those not heretofore included in the CAA program. A total of $18,968,871 will go toward continuing work on 113 other projects in the United States started in the initial program authorized last October.

216 On Contract

Work on 216 of the projects will be by contract, with bids to be advertised within from 60 to 90 days. Eighty-seven projects will be executed by the WPA, while 15 of the projects will involve both contract and WPA work.

It is expected that all work will be completed sometime shortly after the first of the year. In the over-all CAA airport program, which began last October, completion of the present program will mean that the national total of airports will be increased by 246 Class Three ports, 43 Class Four, 14 Class Two, and two seaplane ramps as a result of the CAA program. Class ratings are by runway lengths: Class One having runways of 2,500 feet or less; Class Two, 2,500-3,500; Class Three, 3,500-4,500; and Class Four, 4,500 or more.

Improvements Handled Locally

Airport construction and improvement projects under the supervision of the CAA are limited to ports owned in fee simple by local governmental authorities. The work undertaken on these airports is restricted to the development of landing facilities. All other improvements, including hangars and other buildings, must be done by local enterprises or local government. The ports must be operated in the general public interest and must remain in public ownership. Local government must agree to maintain and operate them.

The program was authorized by appropriations aggregating more than $94,977,750 made by Congress early in the summer and available July 1.

"No recommendations for improvements or construction were made until a thorough survey by airport engineers established the value of the locations to national defense," Brig.-Gen. Connolly stated in issuing the list of ports to be improved. "However, while the airports have been selected to meet defense requirements, every effort has been made to select sites offering future value to commercial and civil aviation, thus insuring a permanent return from this defense investment."

Alias Claude Foiled

(Continued from Page 2)

cused . . . no one . . . the Judge got us charged . . . aw heck, he's guilty."

"Next case," roared the Judge, "and let's put this one on ice before we open it up."

On Last Flight

Dr. Ralph Greene

Although Dr. Greene had periodically been in ill health for the past several years, his death on August 1 came as a shocking surprise to his host of friends in the industry, which included to a man all the air line pilots. Words are pitifully inadequate to describe his many accomplishments for the medical and air line pilot professions. He was the father of the Line Pilots Federal 85-Hour Monthly Limitation. In the early days, when the pilots were constantly fighting for their rights with their backs squarely to the wall, Dr. Greene was always very much in evidence as their ally—their Lafayette—fighting in the thick of all their battles, never wavering or tiring. The pilots' convictions were his convictions — that was good enough for Dr. Greene. He was himself an accomplished pilot and one of the very few honorary members of Air Line Pilots Association. His memory will live forever, or as long as line pilots climb into the blue to accomplish their winged rounds of commerce. Alohoa, our friend and staunchest ally, we shall meet again.

RULES AMENDED

(Continued from Page 1)

or civil flights in the interests of aeronautical development, such as the testing of new high-altitude aircraft.

The airspace below 3,500 feet remains free for the use of all pilots with no more restrictions than heretofore. This permits owners of aircraft who do not have the necessary equipment to fly cross-country with the same convenience as in the past. This area also remains available for flight training.

Regulations Simplified

At the same time the Board simplified the previous regulations governing the visibility and ceiling requirements on the airways by striking out passages in the regulations which were confusing to many pilots.

Further amendments require that pilots flying contact shall fly 500 feet below or above an overcast. The rule previously in force required only 300 feet. The purpose of this rule is to reduce the danger of collision between an aircraft suddenly emerging from a cloud and one immediately below or above the cloud. The great increase in speed of aircraft has been taken into consideration.

These amendments were adopted as a result of the recommendations made by the Interdepartmental Air Traffic Control Board composed of representatives of the Army, Navy, Civil Aeronautics Administration, and the CAB. This group conducted a survey covering the greater part of the United States and formulated their recommendations after discussing them with several hundred representatives of every phase of aviation.

THEN AND NOW *Contrast the huge, cumbersome-looking biplane in the upper photograph with the sleek, streamlined monoplane in the lower picture. These photographs, from the Aeronautical Chamber of Commerce, typify the spectacular progress made by the American aircraft industry in 23 years. The plane at the top is the 1918 Martin MB-2, America's first twin-engine bomber, while the ship at the bottom is the Martin B-26, latest U. S. medium bomber, described by the Army Air Corps as "faster than most of the pursuit planes now fighting in Europe."*

LATE NEWS

(Continued from Page 1)

B-19

The giant B-19 bomber cruised over San Diego county for two hours and fifteen minutes in its third air test. After having been grounded for adjustments, the 82-ton flying fortress is being flown daily to complete tests.

Invention

The National Bureau of Standards, Department of Commerce, has developed a new device enabling aircraft pilots to determine if the proper electric voltage is reaching each spark plug in the engine and other parts of the ignition system. The new device is regarded as important because of the present day production of high-temperature aircraft engines.

Cut

In a recently proposed report on American Airlines air mail rates, F. A. Law, Jr., Civil Aeronautics Board examiner, recommended that the current rates of the Company be cut to 9.5 per mile. American has requested time to answer Examiner Law's report.

It is expected, when oral arguments on this question take place before the CAB, that certain other air lines will appear as interested parties on more or less the same basis as friends of the court appear in straight legal cases.

Advances

Don Duff has resigned as Eastern Divisional Traffic Manager for Pennsylvania-Central Airlines to join Northeast Airlines. Duff has accepted the position of General Traffic and Sales Manager, with offices in Boston.

Prior to his departure, Duff was given a farewell party by PCA employees.

Swamped

Bell Aircraft Corporation is facing a backlog of $78,000,000, including a recent army order for $7,000,000, according to sources close to the Company. Letters of intent for additional military planes will up the unfilled orders considerably over $100,000,000. This total does not include orders for tail assemblies in connection with the new bomber program.

(Continued on Page 6, Col. 1)

75 Planes May be Released to Lines

Air line sources are waiting for confirmation of reports that 75 much needed transport planes might be released to them to help take care of steadily increasing air travel.

The rumors that 75 planes might be available resulted from reports of a meeting in California between air line presidents and a congressional aviation committee. Reports also stated that the air lines would definitely be assured that they would not be asked to transfer more planes from commercial to military purposes.

One line, which had given up several planes to the Army, was promised four Douglas DC-3 transports early this fall.

Estimating that business was 50 per cent greater than last year, one airplane company said it could use a dozen more transports tomorrow.

More than 100 transport planes have been transferred from airplane ownership to British, and military demands have taken most of the factory output.

One source commented:

"I expect the country's air lines could use another 100 to 150 planes right now. Why, if we had them, we'd be carrying light and even some heavy defense parts. There'd be more freight sent by air, and maybe all first-class mail could go by air."

PILOT DESCRIBES FERRYING 'ROUTINE'

George H. Hutchinson, who has ferried more American bombers to England than any other pilot, describes these flights across the North Atlantic ocean as routine. He adds that soon many planes will be making the 2,000 mile crossing every 24 hours.

Hutchinson, head of the "Flying Hutchinson" family, spoke recently at a luncheon in the Hotel Sherman at Chicago. He is making a lecture tour of the eastern United States.

"In recent weeks we have been flying the ferry pilots back to Canada from England in new American Consolidated B-24 four-motored bombers," he explained. "This will enable Atfero (the Canadian ferrying company) to speed up its deliveries 1,000 per cent. Twice as many planes were delivered in May as in April, and three times as many in June as in May.

"I held the record for the England-Canada return flight — 13 hours 21 minutes — when I got leave the first week in July. The ground to ground eastbound crossing record was 9 hours and 20 minutes when I left. But the newer ships coming along undoubtedly will break these records.

Second Over-Seas Service Planned

A second United States transatlantic air service is expected to be established by November, American Export Airlines announced recently. Three Vought-Sikorsky flying boats, similar to the Navy's "flying dreadnought" long-range bomber, are scheduled to make the crossings nonstop.

The American Export Airlines holds authorization from the Civil Aeronautics Board to run a scheduled service between New York City and Lisbon, Portugal. The Air Line recently became a partner with Pan American Airways and four domestic air lines in operating and using the Airlines Terminal Building in New York City.

An air mail subsidy was refused the Air Line by the Senate last May.

—*Pan American Photo*

SHIPMATES **Dr. Nicholas A. C. Slotemaker, newly appointed Director of the Netherlands Information Bureau in New York; Pan American Airways Captain S. G. Bancroft; and at his right, Ernest Hemingway, author of "For Whom the Bells Toll," "The Sun Also Rises," and "Farewell to Arms," photographed as they arrived at Treasure Island, San Francisco from the Far East on board Pan American Airways Philippine Clipper. If smiles are a criterion their voyage was pleasant.**

ALTITUDE AND THE AIRMAN

Fifteenth installment of the article, "Altitude and the Airman," written by Dr. Ross A. McFarland, and abstracted by the late Dr. Ralph Greene. Succeeding installments will appear in following issues.

XII. THE EFFECTS OF HIGH ALTITUDE ON THE AVERAGE UNACCLIMATIZED AIR LINE PASSENGER (Cont'd.).

Causes of Inflammation Are Important Factors

Generally speaking, any condition of the nose or throat causing, or likely to cause, nasal or pharyngeal catarrh or inflammation is a potential factor in the causation of obstruction of the Eustachian tubes. The primary causes appear to be head colds and inflammation of the mucous membranes of the nose, accessory sinus disease, unhealthy tonsils, adenoids, and infectious catarrh of the nose or throat. Mouth breathing, excessive smoking, and drinking are other predisposing causes.

It must also be kept in mind that conditions of the nose, throat, and ears, of apparent trifling importance on the ground, tend to become considerably aggravated in the air. Free nasal respiration and a healthy upper respiratory tract are essential to the airman. If any of the above-mentioned pathological conditions are present with concomitant signs or symptoms, immediate steps should be taken to correct them.

Methods of Facilitating Equalization of Pressure

Equalization of pressure within and without the ear cavity can often be maintained by the act of swallowing. In a poorly ventilated airplane or at high altitude, where breathing through the mouth as well as through the nose may be present, the throat is apt to become parched and swallowing may become more difficult. On this account chewing gum is recommended, since this provides the saliva necessary for the act of swallowing.

If a descent is very sudden, the pressure within the tubes in many cases is equalized by pinching the nostrils, closing the lips tightly, and then swallowing. *Special care* should be taken not to blow or force the air out of the chest into the nose and ears because of the danger of spreading infection into the sinuses. If, by chance, there happens to be streptococci germs in the nose, specialists in this field believe that there is danger of causing serious sinus infection. Pilots should take special care to avoid such procedures, and passengers also should be warned of this danger.

Simpler Method Is Effective

A simpler procedure for equalization of pressure within the ears which may be efficiently acquired by practice is the following. As if beginning to yawn, open the mouth slightly while trying to maintain the lower incisor teeth as far in front of the upper as possible. The effort can only be strongly sustained for a minute or less, and one should be conscious of tightly contracting the muscles of the throat at the same time.

If the procedure succeeds, one can pass through considerable changes of atmospheric pressure without having to swallow or inflate the ears, as the walls of the Eustachian tubes are kept apart for an appreciable time by this voluntary muscular action alone. If, for any reason, a pilot finds difficulty in equalizing pressure in his ears, or can equalize the pressure easily in one ear only, and experiences discomfort during flying, medical advice should be sought at once.

Serious trouble may also arise if passengers are asleep during a sudden descent, especially if they are suffering from a common cold, sinus trouble, or other infections in the nose, throat, or ears. Human beings, in spite of their amazing capacity for adjustment to new situations of an emergency nature, have never faced the necessity of swallowing while asleep or unconsciously making the necessary adjustments to equalize the pressure on each side of the eardrum. On several occasions where descents have been made too rapidly, the eardrums have been ruptured while the passengers remained asleep. Such injuries give rise to serious pain and slightly defective hearing. The stewards should take special care to awaken passengers who have had trouble with their ears or sinuses so as to avoid such dangers.

Airsickness

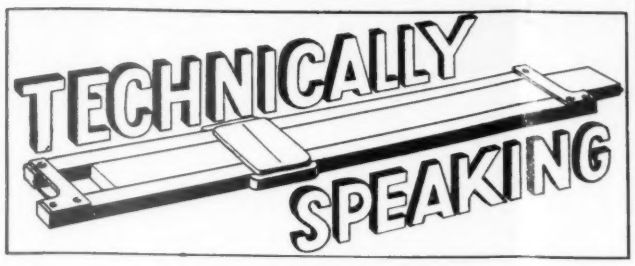
Airsickness is closely allied to seasickness, train sickness, and other nauseating reactions associated with unusual movements of the body. The response is a complex one involving various parts of the body. The sense of equilibrium, which includes motion and position in space, is derived from the sense of vision, the vestibular mechanism in the ears, the visceral sense (stomach and internal organs), the sense of touch, and sensations from our bones, muscles, and joints. As far as the sensing of motion is concerned, these reactions are all interconnected.

Probably the most important organ involved in airsickness, however, is the vestibular apparatus in the ear. This apparatus has several parts; there is a saccule, a utricle, and three semicircular canals on each side, located in the temporal bone, which are bony labyrinths lined with endothelium and bathed in a fluid. There are delicate hair cells located at certain areas in the labyrinth.

One theory suggested that the utricle and saccule had to do with the linear motion and the semicircular canals with rotation. It is now generally believed that they are all involved in the sensing of motion. Rapid rotation causes a change in tension in the endolymph, which stimulates the hair cells and gives us a sense of motion. This sense of motion is not always correct; sometimes we may feel we are turning in one direction, and yet actually we are turning in the opposite. This is called vertigo, and often causes nausea and vomiting. Vertigo often persists for some time after the turning stops. If we are rapidly turned to the right, we will have the sensation of turning first to the left, and then to the right; if the turning is slowed or stopped, we will have the sensation again of turning to the left. This accounts for the difficulty fliers who are not trained to fly by instruments have when flying blind.

Sense of Direction Is Lost

If we turn an individual to the right with head bent forward at an angle of 90 degrees, and then when the turning is stopped ask him to sit up, he will feel that he is falling to the left. In order to overcome it, he will lean to the right; since he is not falling to the left, his leaning to the right results in his actually falling to the right.



OUTWITTING THE WIND

(The story of a new addition to the Link Trainer—compiled by Aeroproducts Manufacturing Company, Kansas City, Mo. . . . Now vital factors of wind effects may be added to instrument training methods. To be continued in the August issue.)

One of the most serious difficulties in flying on instruments is occasioned by the effect of wind of unknown velocity of direction. These difficulties are made more serious by the fact that information concerning wind is least available at exactly the time it is most needed. To some extent this condition is being alleviated by upper air soundings of radio sondes, but it is still necessary to assume that the pilot is at all times subject to wind which he cannot accurately estimate and which may change materially in direction or strength without his knowledge.

Most all instrument flying is done when the wind is of moderate velocity and its direction is fairly well known. Because of this fact the methods of orientation and of instrument navigation which have been developed have turned out to be inadequate when winds are of very much greater magnitude than normally, or when their direction is radically different than expected. This is indicated by the fact that several serious delays in scheduled flights and perhaps even some serious airplane crashes have been caused directly or indirectly by the fact that the winds encountered by the pilot were different than he expected or were of much greater velocity than he anticipated.

Found Totally Inadequate

The navigational methods which were worked out in winds of moderate velocity—not more than 40 miles per hour—were found to be totally inadequate to cope with situations in which wind exceeded 60 to 80 miles per hour. While winds of such magnitude are unusual in instrument flight, the serious consequences which may result in a pilot's inability to handle his flight under such circumstances makes it highly desirable to redesign our methods of instrument navigation.

Pilots must be trained in such a way that no wind, however great its velocity or whatever its direction, can possibly confuse them or interfere with the flight.

Unfortunately, it is not possible to predetermine direction or velocity of the wind during intentional instrument flight training. One must fly in the wind which exists at that time. To overcome this difficulty, the Link Trainer provides an excellent medium, provided that the effect of the wind of any direction or velocity may be predetermined and accurately simulated automatically. The Wind Simulator used with the Link does just that.

Attachable to Any Link

It is an instrument which may be attached to any Link for introducing into the record of any Link Trainer the effect of wind from any direction or of any magnitude. The Wind Simulator accomplishes this by introducing into the motion of the marking pen, movement of velocity and direction, proportional to the velocity and direction, proportional to the velocity and direction of the wind on the scale of the chart. When this device is in use, the direction and velocity of the wind may be set or varied, and the instrument automatically simulates the correct drift and ground speed, regardless of the heading of the Trainer.

With the Wind Simulator, the Link operator can send appropriate radio signals to the pilot in the Trainer, causing the pilot to fly the problem in exactly the same manner as he would fly it under given wind conditions. When the direction and velocity of the wind is changed during the progress of the problem, the Wind Machine automatically applies the correct drift angle on any heading of the Trainer and causes the recorder to travel at the correct ground speed according to the angle between the Trainer and the wind.

From Any Point in Circle

Wind speeds from zero to 100 m.p.h. may be set on the machine, and the direction of the wind may be from any point in the circle. Either the direction or the velocity of the wind may be changed at will during the progress of a problem.

The principle of the Wind Simulator is simple but fundamentally correct. To use it no substantial alterations need be made in any present equipment. The only change is that a chart plate is mounted on the *top* of the recorder, which is done by removing the handle and replacing the three short screws in the recorder frame with three longer screws that hold the chart plate in place. The chart is thus placed on top of the recorder, so that a pen mounted on a movable arm traveling on a rail at the rear of the Trainer Table will trace its marks on the chart.

Thus the direction and speed of the chart *on* the recorder represent the air speed and heading of the Trainer, and the speed at which the pen arm moves determines the wind speed which may be varied according to the speed of the wind desired. The direction of the simulated wind is determined by the orientation of the chart with respect to the moving pen arm. The pen thus traces the resultant of the air speed and heading vector, and the wind direction and speed vector. This is the track and ground speed of the simulated flight. Because it is completely automatic, drift and ground speed corrections are continuously made during the entire flight, even during turns. After once setting the direction and velocity of the wind, the operator need pay no more attention to the device.

Too Easy for Experienced Pilots

As soon as the device was placed in operation in routine training of pilots, it became apparent that a need existed for additional training and research in instrument flight and navigation in winds of high velocity. Trainer courses *without* wind were not difficult enough for experienced pilots. After analyzing the troubles encountered by skilled pilots in instrument flying it became apparent that the principle sources of trouble were found in unknown or unusually extreme wind conditions. While the effect of a known wind on dead reckoning problems is easily calculated, in radio range navigation, in unknown winds previous methods have been found adequate. In standard 90-degree and fade-parallel orientation methods, no difficulty is usually experienced in wind conditions in which the direction is unknown and the wind is not extreme.

But with the wind velocity 40 m.p.h. or more, certain difficulties become apparent which are not easily seen in wind of lesser velocity. These difficulties are easily demonstrated, and training in overcoming them is easily given on the Link Trainer, used with the Wind Simulator. For instance, in the 90-degree method of radio range orientation, which had previously been considered very reliable on square ranges, it was found that a wind of 72 per cent of the air speed made the solution of this problem completely false. Fig. 1 illustrates this difficulty. In this figure, orientation is shown by means of the 90-degree method under two different circumstances.

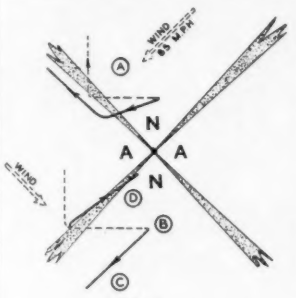


FIG 1

At position A, Fig. 1, a plane starting in the "N" quadrant would, without wind, intercept the leg, make a right turn, and recross the leg back into the "N" quadrant. However, with an 85 m.p.h. wind and 120 m.p.h. air speed, the flight would not recross the leg, thus the orientation would not be proved.

Would Not Intercept, But Drift

At a starting point B, Fig. 1, a pilot working the 90-degree problem would, without wind, cross the leg and go further into the "A" quadrant, thus proving his position near the southwest leg. However, with a wind of 85 m.p.h. in the direction shown by the arrow, he would never intercept the leg, but would drift approximately parallel to it indefinitely as shown at point C. If, however, he did succeed in crossing the leg, then turned to heading perpendicular to the A average bisector, he would drift back across the leg, as shown at point D, thus proving that he was on the northwest leg which would give him a false orientation. An instance occurred in flight, in which failure of the 90-degree problem two consecutive times caused a pilot to land 300 miles off his intended course.

In high wind conditions beam riding is made much more difficult, as most pilots find that considerable practice is necessary before they can do a satisfactory job of beam riding when a strong cross-wind is introduced. When winds parallel the leg, it takes much longer to get back to the leg flying upwind than it does downwind, and the bracketing will be found much larger on one side than on the other. In flying around a range, going from one leg to another, as is necessary in holding for air traffic or in making terminal approaches when the final approach is on a different leg than the initial approach, the difficulty high winds cause furnishes a very fertile field for pilot training, as has been demonstrated by the many delays from this cause.

Forces Pilots to Fly by Signals

Simulated winds result in forcing the pilot to fly *by the signals he hears*, rather than by a guess as to what the heading should be. An interesting demonstration of this may be found in the so-called "turn-around" problem. This problem is started exactly the same as bracketing an unknown leg and continued until the pilot crosses the station. When he has been instructed to turn around and fly back out the same leg on which he came into the station, with a strong cross-wind—50 or 60 m.p.h.—the outbound heading on the leg will be materially different . . . perhaps as much as 60 degrees difference from the inbound heading. This makes it absolutely necessary for the pilot to listen to the background and on-course signal as he makes his turn-around near the station. If he attempts to fly the reciprocal of his inbound course, he is likely to get lost.

Strong wind on the "unknown-range" problem materially increases the difficulties. In flying, the problem of the change in the ground speed which occurs on different headings is very confusing. Here, again, as in the "turn-around" problem, the pilot must fly solely by the signal he receives.

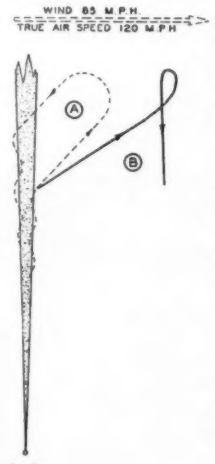


FIG 2

Other difficulties in radio range orientation and in procedure flying have been discovered by means of the Wind Simulator. The procedure turn shown in Fig. 2 without wind at A, when done with a wind of three-quarters of the air speed or more, will result in a figure as shown at B, in which the object of the procedure turn is completely lost because the flight path does not return to the leg. Old instruction for making a procedure turn was to turn 45 degrees to the right and hold the new course 45 seconds. Then make a 180 degree turn to the left and hold that new heading until a leg is intercepted. A strong wind from the direction of the leg, in this case, would cause him *never* to intercept the leg.

New Technique Suggested

As a result of wind research a new technique is suggested for making the procedure turn. The new instruction is 45 degrees to the right for 45 seconds. Then start turning to the left, but slow the turn down or stop it completely before the 180-degree turn has been completed and hold this heading until the leg is approached as indicated by an increasing background signal. Then the course may be altered to get smoothly on to the leg. Other difficulties and weaknesses of the old instrument navigation methods have been discovered, and the methods have been revised to correct these difficulties and to render them adequate in winds of the highest velocity, regardless of whether the pilot knows their direction of velocity or not.

To demonstrate the various weaknesses of the 90-degree orientation method to the pilot, the wind should be applied after he has started the problem so that the wind direction can be put in the most difficult place. If the wind is placed at such a direction as to be across the initial heading and away from the station the pilot will be greatly delayed in intercepting the leg. If he is in the wide quadrant of a squeezed range, he may even have so much drift as to cause him never to intercept the leg.

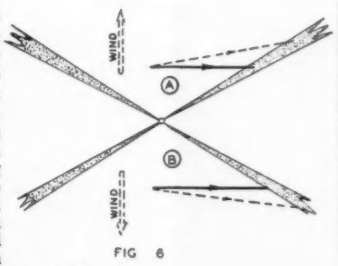


FIG 6

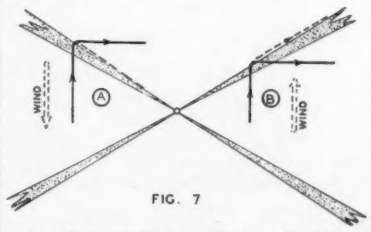


FIG. 7

If the wind is placed parallel to his initial course, then after the pilot makes his 90-degree turn he may run into difficulty. If he has been on the leg, which will cause him to go further into the quadrant after making the right turn, a wind from his left may cause him to recross the leg, thus upsetting his orientation. If he is on the opposite leg, which requires his recrossing the leg in order to establish his orientation, a wind from his right will cause him to be very slow in such recrossing, or possibly, on a squeeze range, not to recross the leg at all. The remedy is *never* use the 90-degree method on a squeezed range.

Request of 19 Lines For 250 Transports Strongly Supported

(Continued from Page 1)

the last quarter of 1942 and the first quarter of 1943.

The Office of Production Management, which has the authority over the numbers and types of airplanes to be built in this country, already has received notice that the demand will be made. A hearing may be called at any time. Strong support for the air lines is said to be developing in Congress, the Navy, the Civil Aeronautics Board, and virtually every department except the Army.

Volume Increases; Only 350 Planes

Two important facts which stand out in the air lines' fight for more planes are:

1. Air lines today are asked to carry 35 per cent more passengers, 40 per cent more express, and 30 per cent more mail with the same number of airplanes they possessed at the end of 1940—about 350 in all.

2. Because of a world shortage of transport planes the United States Army must depend upon the air lines' equipment to move troops to any point in the western hemisphere where they may be needed in an emergency. The country would be placed in jeopardy with any further reduction in the number of commercial transport planes, and a rapid increase in the total number of transports available should immediately be made.

Forced to Turn Down Passengers

A spokesman for the air lines who wished his name withheld stated:

"Air line traffic now is made up largely of business executives and men who are trying to key their production to the government's demands. There are so many such travelers that the lines constantly turn down hundreds of persons.

"The lines also are carrying large numbers of ferry pilots from West Coast factories to the Eastern Seaboard. These pilots have excess baggage, and this necessitates a reduction in westbound passenger and mail loads.

"The British were warned as long as a year and a half ago that if they wanted transport planes they should order them. The orders were not placed, but the British are now pressing demands. By taking United States transport planes they are slowing down the production program upon which they are depending for war supplies.

Germans Have 5,000 Transports

"We understand the Germans have more than 5,000 Junkers Ju-52 tri-motored transports attached to each of their five air armies.

"This country needs about the same number. If we move one division of men—10,000 to 12,000 under the new streamlined divisional structure—we would need three times as many transports as the country's total fleet of 350 air liners.

"And in modern war one division is not enough. We would have to move at least three to any point where an armed threat was being made against us. To do this we would need at least 3,500 airplanes."

The House of Representatives committee investigating air line accidents is studying the productive capacity of West Coast aircraft manufacturers and is expected to make a strong plea for the air lines before the OPM.

Three Oil Men are Vultee Directors

J. Mason Huogland, President of the Sour Distributing Co., Nashville, William C. McDuffie, former head of the Pacific Western Oil Company, and Henry Wilson of Pasadena, retired President of the Wilson-Snyder Mfg. Co., Pittsburgh, were elected to the Board of Directors of Vultee Aircraft, Inc., at the annual meeting in Downey, Calif.

UNUSUAL For commerce and defense. Six famous pilots, who combined have flown 100,000 hours, watched with interest the ceremonies of the dedication of Chicago's new Municipal Airport. From left to right they are: Capts. W. H. Proctor, American Airlines; Harley Gambee, Transcontinental & Western Air; M. N. McNeil, Pennsylvania-Central Airlines; Tommy Bridges, Chicago & Southern Air Lines; Mal Freeburg, Northwest Airlines, and Jack Knight, United Air Lines.

LATE NEWS

(Continued from Page 4)

France

Air France (Airline) is reported to have received permission from Argentine and Chile to resume air line transportation across the South Atlantic and Europe.

All-Air

All-air passenger, mail, and express service between Singapore and cities throughout the United States became a reality recently when a Pan American Airways Clipper reached San Francisco, there to connect with United Air Lines Mainliners, after having flown 9,473 miles from the Malayan hospital. Approximately seven days is required for an all-air journey from the Atlantic Seaboard to Singapore by the connecting services of United and Pan American.

Called

All Air Corps Reserve officers, excepting those whose civilian occupations are considered more valuable to the defense program, are being ordered to extended active duty by the War Department.

Largest

Those planning to visit Miami for next January's 14th Annual All American Air Maneuvers will find a vastly improved International Airport. Work has been going on steadily for many months, and already it is beginning to assume a finished look. Watching the progress from day to day, it is hard to realize that anything is being accomplished, the airport is so huge. It covers a total of 870 acres of land and, when completed, will be the largest airport in the world. Begun in August, 1939, it represents an investment of $2,000,000 in landing field facilities, financed through WPA.

Victory

So impressed was Lord Halifax during his recent tour of aircraft plants, that he declared, "I wish that I could have Hitler with me. Then he could see, as I have, what's coming to him and his ilk."

Rescue

The air liner which, like the locomotive and the automobile has through the years supplanted the horse as a means of transportation, recently came to the rescue of faithful old Dobbin. Bound for Brownsville and San Antonio, Tex., a 64-pound air express shipment of a special serum for horses stricken with brain fever was flown by United Air Lines from the Cutter Laboratories in Berkeley. According to the laboratories, a severe "epizootic"—the equinine equivalent of a human epidemic—was raging in certain sections of Texas, and the air expressed serum was the only known antidote.

Negotiations Are Completed

(Continued from Page 1)

The first negotiations were held November 12, 13, and 14, 1940. S. L. Shannon, Vice-President in Charge of Operations, represented the Company, and on the pilots' side of the conference table were F. B. Kern, R. C. Young, V. A. Peterson, F. P. Compton, and F. A. Stone.

Negotiations Were Constructive

All these negotiations were pleasant and constructive. The only reason that this contract was not finished in a shorter period of time was because of unfortunate incidents, one of which involved the injury of the Company's President, Capt. Eddie Rickenbacker.

Amended Agreement with AA Completed

On August 1 an amended agreement was completed between American Airlines and its pilots. These amendments were so extensive that this document was regarded as practically the same as a new agreement. The reason for the numerous amendments to this contract was because it was the first to be signed with any air carrier. Naturally, it was in the category of a pioneering effort, which later required considerable streamlining. The pilots' representatives at these conferences were W. G. Hughen, W. H. Proctor, G. F. Baird, and S. P. Saint. The Company was represented by C. R. Smith, President; Hugh L. Smith, Operations Manager; and R. L. Mitchell, Assistant Operations Manager in Charge of Flying.

Size Complicates Problems

Making a contract to cover American Airlines' more than 400 pilots is no easy task. American operates the largest air network in the world, which naturally involves a commensurate number of pilot-operating problems which must be solved before an agreement can be completed and signed.

During the past weeks the Association's schedule of "must" projects has been extremely crowded. There has been no shortage in the flow of urgent questions through Headquarters, many of which were of such a nature as to demand immediate attention.

On August 9 the Central Executive Council meeting was held with an attendance of 25 members and proxies. This was the largest Central Executive Council meeting ever held by the ALPA.

C&S Adds Memphis To Chicago Flight

Increased air travel from the south and southwest has necessitated the inauguration of additional air service between Memphis and Chicago via St. Louis. D. D. Walker, Vice-President and General Sales Manager of Chicago and Southern Air Lines, announced today that on July 15 a new early morning flight was originated at Memphis.

Air Transport is Vital to Defense

The vital part which the air transport industry is playing in its acceleration of defense shipments may be read in the recent report of the Railway Express Agency on the growth of air express service in recent months.

Gross revenue from nation-wide air express in April increased 41.81 per cent over April of the preceding year, Railway Express Agency reports. Shipments for the month totaled 108,687, an increase of 33 per cent over the corresponding month in 1940.

Air express shipments handled in Washington in April reached 4,975, a raise of 66.27 per cent over April, 1940. Gross revenue was up 78.01 per cent. Railway Express Agency will maintain 24-hour air express service at the new Washington National Airport.

Growth of ALPA during the last year has been phenomenal, and the necessity of moving to larger quarters is daily becoming more and more apparent.

'BLACKOUT' PLANT NEARS COMPLETION

Record production of four-engine, long-range bombers is scheduled for Douglas Aircraft Company's huge new "blackout" plant, now nearing completion in Long Beach, Calif., it was disclosed here today by President Donald W. Douglas.

While no further details were revealed, it was anticipated that additional production facilities and equipment will be installed, and new jobs created.

Under the Douglas-Vega-Boeing bomber program announced in Washington and Seattle, Boeing B-17E "Flying Fortress" type of heavy bombers will be built by Douglas from Boeing designs. Similar airplanes also will be turned out by Vega, thus giving Southern California greatly increased production for national defense.

Joint Committee Speeds Output

Organized at request of the War Department to speed output of four-engine, long-range bombers, the cooperative production program is directed by a joint administrative committee, comprising representatives of Boeing, Douglas, Vega, and U. S. Army Air Corps.

Subcommittees on engineering, tooling, and purchasing already have been at work for several weeks. Purchasing is to be handled by the individual companies and co-ordinated through the joint committee and the Office of Production Management. Engineering data, such as blueprints and templates, will be furnished by Boeing and duplicated by Douglas and Vega.

Will Augment, Not Disrupt

Plans being mapped to insure the production of "Flying Fortresses" will augment, but not disrupt, the Long Beach plant's large-scale output of Douglas military transports and attack-bombers.

Boeing-Douglas collaboration in the production of heavy-bombers closely follows procedure established by the two companies in midsummer of 1940 when, in the interests of speed and efficiency, Douglas divided with Boeing a large French-British order for DB-7 light-bombers.

U.S. to Construct World's Largest Wind Tunnel

When construction work is completed on the new Ames Laboratory of the National Advisory Committee for Aeronautics at Moffet Field, Calif., and the new engine-testing laboratory is finished at Cleveland, the United States will compare favorably with Germany in air research facilities.

That is the opinion of Smith J. De France, engineer in charge of the Ames laboratory.

The world's largest wind tunnel for testing airplanes is being built at the Ames Laboratory. Huge electric fans, 44 feet in diameter, will create winds inside the great tubular structure similar to the air flow in flight.

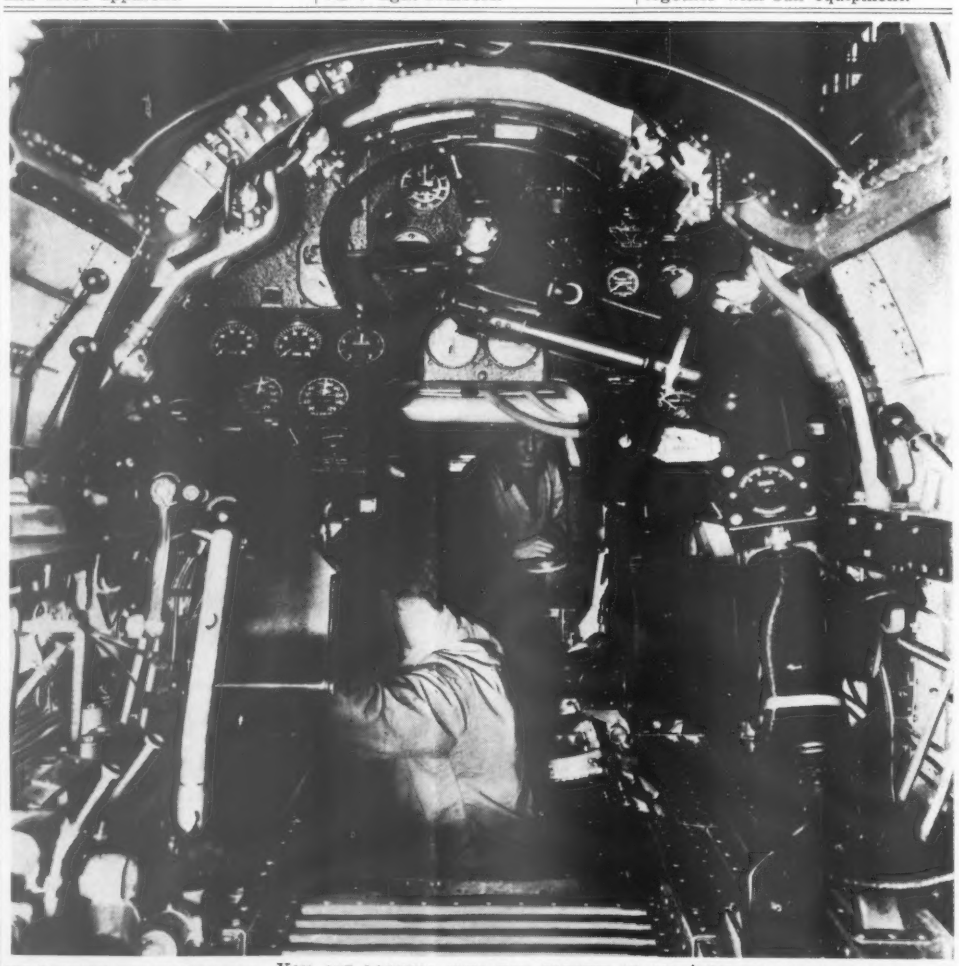
The laboratory, which is being completed at a cost of $10,000,000, now has 170 employees. That number will be increased rapidly in the next few months.

The importance of air research is illustrated by the plane which was taken to the oldest of NACA laboratories at Langley Field, Va., a few months ago. The newly designed plane represented the last word — so the manufacturer thought — in power and speed. When the NACA got through with it, the machine was 50 miles an hour faster than it was when it left the manufacturer.

Glider Force Second To None: Arnold

Maj. Gen. Henry H. Arnold, Chief of Army Air Forces, predicted that "we shall have a glider force, we hope, second to none, ready for service whenever and wherever it may be needed" in a talk on July 13 at the Twelfth Annual National Soaring Contest in Elmira, N. Y. He said:

"We know that we must have gliders, perhaps hundreds and possibly thousands of them, capable of carrying at least 15 men each together with full equipment."



FLIGHT SECURITY YOU ARE LOOKING INTO THE COCKPIT OF AN AMERICAN BOMBING PLANE AS WORKMEN INSTALL THE DOZENS OF INSTRUMENTS THAT WILL SPELL "FLIGHT SECURITY" TO PILOT AND CREW. MULTIPLY THIS SCENE SEVERAL THOUSAND TIMES AND YOU WILL HAVE SOME IDEA OF THE TASK CONFRONTING AERONAUTICAL INSTRUMENT MAKERS WHO ARE WORKING DAY AND NIGHT TO FULFILL THEIR PART OF THE GROWING DEFENSE PROGRAM. THE PHOTOGRAPH, FROM THE AVIATION NEWS COMMITTEE, SHOWS THE NEARLY COMPLETED NOSE SECTION OF A MARTIN MARYLAND BOMBER.

Civil Air Regulations — Legislation
Additions - Changes - Amendments

REGULATION No. 165: AMENDMENT No. 115 TO CAR:
ADOPTED JUNE 6, 1941,
EFFECTIVE AUGUST 1, 1941.

Aircraft Rating Classifications:

This amends Parts 20, 21, and 61 by providing a new method of rating pilots for different aircraft. Henceforth aircraft, for rating of pilots, will de differentiated as to type, class, and horsepower. Aircraft types are Airplane, Autogiro, Glider, and Lighter-than-air Craft. Airplanes (only) are classified as single-engine, land; single-engine, sea; multi-engine, land; multi-engine, sea; and unconventional. Horsepower ratings will be given for airplanes of 80 H.P. or less, and for horsepower in excess of 80 the pilot will be rated in a range of 50% less to 50% more than the horsepower of the airplane in which his competency was demonstrated. Where a pilot checks out for two horsepower ratings he will be deemed to be qualified on all intermediate ranges between the lowest of the lower range to the highest of the higher range.

To secure renewal of ratings the pilot must show 10 hours of solo flight within the preceding 6 months in aircraft of each type, and 5 hours of solo on airplanes of each class without regard to horsepower. The 5 hours for class rating may be included in the 10 hours for type rating. Horsepower ratings are retained as long as any airplane class rating is effective.

REGULATION No. 166: AMENDMENT No. 116 TO CAR:
ADOPTED JUNE 6, 1941,
EFFECTIVE AUGUST 1, 1941.

Aircraft Engine Airworthiness:

This amends Part 13 of CAR by substituting a new Part 13. The new regulations require 150 hours of testing instead of 50 hours as formerly required. Flight testing is no longer required for the securing of a type of certificate but, before an engine is rated airworthy, a flight test is required of each installation in aircraft of different makes or models. Additional tests are required, notably a vibration test.

REGULATION No. 167: AMENDMENT No. 117 TO CAR:
ADOPTED JUNE 13, 1941,
EFFECTIVE JUNE 13, 1941.

Physical Requirements for Pilots:

This amends Part 20 of the Civil Air Regulations. Changes are in the administrative procedure, that is, the method of handling reports of physical examinations of pilots, and concerns the CAA and the medical examiners. The basic requirements affecting pilots are unchanged.

REGULATION 168: AMENDMENT No. 118 TO CAR:
ADOPTED JUNE 13, 1941,
EFFECTIVE JUNE 13, 1941.

Student Pilots:

This amends Section 20.610 and 20.611 of Part 20, and restricts the flight of student pilots with respect to carrying passengers for hire and keeping up their practice.

REGULATION No. 169: AMENDMENT No. 119 TO CAR:
ADOPTED JUNE 20, 1941,
EFFECTIVE JUNE 20, 1941.

Procedure for Taking Off and Landing:

Section 60.330 of the Civil Air Regulations are amended as follows:

"60.330—Procedure for taking off and landing.

"60.3300—A take-off shall not be commenced until there is no risk of collision with other aircraft during such take-off.

"60.3301—Aircraft approaching for a landing shall circle the airport or other landing area sufficiently to observe other traffic, unless the pilot receives other instructions from the air-traffic control-tower operator. All circles, either approaching for a landing or after take-off, shall be made to the left unless the pilot receives other instructions from the air-traffic control-tower operator, or unless the Board has prescribed, in the interests of safety, a different procedure for the particular airport or landing area.

"60.3302—Aircraft approaching for a landing shall, unless impracticable, maintain a straight approach course for the last 1,000 feet before crossing the airport boundary.

"60.3303—Aircraft making contact flights within three miles horizontally of the center of an airport or landing area shall conform to the circle rule provided in Section 60.3301 unless flying at an altitude in excess of 3,000 feet above the ground or water.

"60.3304—Air traffic departing from or arriving at a control airport shall take precedence over other air traffic within the control zone of such airport when required in the interests of safety."

REGULATION No. 170: AMENDMENT No. 120 TO CAR:
ADOPTED JUNE 24, 1941,
EFFECTIVE JULY, 1941.

Minimum and Maximum Safe Altitudes of Flight:

This amends Parts 60 and 61 of the Civil Air Regulations.

Altitudes above 17,000 feet are reserved to military aircraft and to air line aircraft when authorized by the air line competency letter. Military aircraft utilizing these altitudes are exempt from all traffic rules except on airways where an air line has authorization to use the same altitudes, and that such military aircraft must have a two-way radio and get clearance before ascending or descending.

Contact Flight Rules are changed forbidding aircraft to enter a control zone unless the ceiling is at least 1,000 feet and visibility at least three miles or unless permitted by a certificated air-traffic control-tower operator, and in no event when the visibility is less than one mile. Outside of control zones aircraft is not to be flown at or below 1,000 feet above the ground or water unless the ceiling is sufficient to permit flight at the minimum altitude prescribed in Sec. 60.35, and unless the visibility during the hours of daylight is at least one mile and during the hours of darkness is at least two miles. Aircraft shall not be flown above 1,000 feet unless the visibility is at least three miles at flight altitude. Five hundred feet vertically and 2,000 feet horizontally from a cloud formation is the closest an aircraft may approach such cloud formation.

REGULATION 171: AMENDMENT No. 121 TO CAR:
ADOPTED JUNE 24, 1941,
EFFECTIVE JULY 1, 1941.

Contact Flight Above 3,500 Feet on Civil Airway:

The Civil Air Regulations are amended as follows:

1. By amending Section 60.471 to read:

"60.471—Contact Flight above 3,500 feet on civil airway. In addition to all contact flight rules, aircraft flying under contact conditions at an altitude of more than 3,500 feet above the ground or water and within the limits of a civil airway shall conform to the rules prescribed for flight under instrument conditions in the following respects:

(1) Compliance with Section 60.53, Flight plans, when flights touch airway traffic control areas;

(2) Maintenance of flight altitudes, (Sec. 60.58); and

(3) Maintenance of communication contacts, (Sec. 60.571).

"60.4710—Equipment. In addition to the equipment required by Sec. 60.41 all such aircraft shall be equipped with a radio receiver as specified in Sec. 04.512(e), a radio transmitter capable of maintaining communication with an airway communications station of the administrator under normal conditions, and a sensitive altimeter as specified

(Continued on Page 8, Col. 7)

Nothing's Slow Around Inland

(Continued from Page 2)

comes from Billings.

Another lad we forgot to mention is Charlie Criswell, who formerly was radio operator at Great Falls for Western Air Lines. He used to beat a Monkey Coop over the back to get in his flying toward that coveted ticket, so that he could get on the other end of the line and wonder why all Dumb Doras seem to start in on radio. No harm, gang, pilots are mechanics turned inside out.

With so many pilots to keep on the Link and outside students trying to learn this deaf and dumb language, the Company has decided to employ a regular operator. So we have with us at this writing Jim Bodner, handling the sign language. Jim formerly was with Boeing School and is a swell guy.

Leave for Greener Pastures

We are sorry to report at this writing the loss of a couple of darn good guys to other air lines. Tim Collins decided he was tired of flying the Link and line together and so resigned the first of June to take a position as a first officer with Continental Air Lines at Denver, Colo. Tim is a darn fine boy, and the gang at CAL can be mighty proud to get him. This places Tim closer to his home, Colorado Springs, which was one of the factors causing him to desert the Boeings for the Lobsters.

Clint Larson was the other first officer who decided that other pastures looked greener and left us to go with Mid-Continent Airlines. Clint was tired of the high country, and this change placed him back home in Minnesota, where the tall Swedes grow. Our ping-pong players will miss you, Clint, and so will all of the bowlers. Be seein' you in Bladerville occasionally.

A recent explosion scare turned out to be Erle Murphey throwing out his chest over the arrival of a seven-pound son. Congrats to both of you, and don't give up the good work. Seven more and yourself, Erle, will make a good ball team.

Several Learn About Life in Denver

Several of our more worldly wise decided one evening to drop down to Denver and make the town. They stopped at a night club for refreshments and placed that come hither look at four beautiful babes, who dashed over to keep our lonesome playboys company. After a wonderful evening of joy and dancing, with each of them thinking they had met *the* girl, they were awakened rudely to the facts of life when the oldest of the four said:

"Time to quit, our work is done. Take us home."

There were some disillusioned country boys when they found their playmates were merely hostesses for the night clubs, just hired to kid country boys along! It's not all gold that glitters, boys. It was a lot of fun though, eh, Paul? Charlie was put out all evening because he had to get Rance and Fred to vouch for his age before any of the places would serve him. Better raise five on a side, Chuck.

Better Food; Less Asphyxiation

I understand that some of our first officers believe they have the key to some of those crack-ups in the past, causes not known for sure. They believe if some of the wives would feed their men a better grade of food, there would not be such danger from asphyxiation.

Harold and Louise Miller of K. C. have been spending Harold's vacation in the old native haunts of Wyoming fishing, fishing, and more fishing. A good many hours were spent looking back over days that were and getting the low-down from all the old gang. Harold is a first officer on TWA, K. C. to N. Y., and we enjoyed hearing from you, Al and Tommie, even if it was secondhanded.

Boy, oh boy, I am glad that is over for another spell. Here's till they put bigger setting knobs on Gyros for weak pilots.

TWA TEA

Said the TWA stewardess to the dining passenger, "How about a nice hot cup of TWA coffee?"

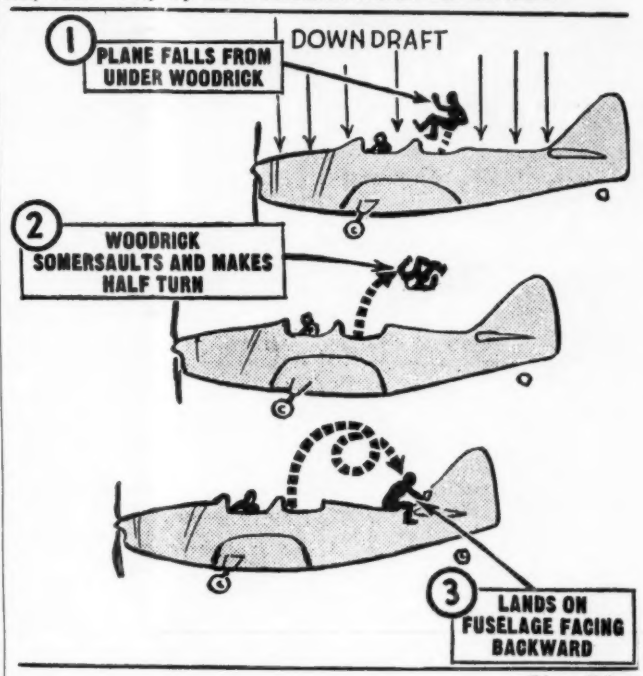
"No thanks," said the dining passenger, "I don't care for TWA coffee, but I should like a nice cup of TWA *tea*."

What! You don't see anything funny about that. My, my, what has become of your sense of humor?

* * *

SPEAKING OF THRILLS

Sketches indicate how Victor Woodrick, a cadet, recently fell out of an army training plane at Belleville, Ill., landed on its tail, and rode the ship to earth while his flying instructor handled the controls. Some fun, what! They say that a sudden downdraft was the cause.



—Chicago Tribune

In the early days this atmospheric condition was referred to as an air pocket. The general belief among early day pilots was that if a plane got into an air pocket it would drop to earth much the same as a pebble would drop down a hole.

Maybe Woodrick is in the wrong business. Perhaps he belongs on the high trapeze where he could do stunts like this with the greatest of ease, and not scare the hell out of hard-working, unsuspecting flying instructors.

Anyway, the moral is, "Keep your belt fastened at all times, and that doesn't only apply to flying."

* * *

UNBALANCING THE SCALES OF JUSTICE

An exuberant attorney wired his client, "A decision has just been handed down in your case, and justice has prevailed."

Whereupon, the client hurriedly sent a retel to his lawyer, "Appeal immediately."

* * *

JUST ANOTHER ILLUSION

The way the story goes, a small town tavern keeper was being persistently harassed by a group of local crusaders who were continuously spouting about the devastating effects of demon rum.

Said the crusaders: "All users of alcohol are going to be short-lived, etc., etc., etc."

Greatly irked, the local tavern keeper held that the time had arrived for him to speak in his own defense and the defense of his wares. This he did by inscribing in imposing letters on the mirror in back of his bar the following, for all to read:

FOLKS THAT DON'T DRINK REALLY DON'T LIVE LONGER —IT JUST SEEMS LONGER.

* * *

YES, BUT NOT MUCH

One grizzly old skipper to another:

First skipper: "You can always tell a rookie copilot by his looks."

Second skipper: "Yeah, that's correct—but it's sure darned hard to tell him very much!"

* * *

PUZZLED

A man who signs himself "New Orleans Copilot" writes in:

"Which do you think women prefer—men who give in to them, or the other kind?"

What other kind?

* * *

WHAT'S THE NEXT STOP, PLEASE?

A draftee was undergoing his first physical examination. After the usual preliminaries, the doctor asked, "Can you read the third line of that optical chart on the wall?"

The draftee, after staring blankly in the direction that the doctor was indicating, asked, "What chart?"

Slightly taken back, the doctor ventured another advance, by saying, "Sit down in that chair."

Came the still more surprising answer, "What chair?"

After wiping his rapidly becoming feverish brow several times, the doctor again addressed the draftee, "Man, you are practically stone-blind. We certainly can't use you in the Army. You may go now."

That evening the doctor, seeking a bit of relaxation, drifted into a nearby movie. Upon becoming accustomed to the darkness, whom do you suppose he recognized sitting next to him, quietly looking at the picture.

None other than the very same draftee who, upon seeing the doctor, calmly and without hesitation, asked, "Mr. would you please be so kind as to tell me where this bus makes its next stop?"

UNDERGROUND *Not the entrance to a subway, but a ramp leading into a huge new national defense plant! Through such underpasses, employees of Douglas Aircraft Company's "blackout" plant here leave parking lots, pass under streets, and come up inside the factory site. Such underpasses supplement other protection provisions for employees, for the well-lighted and ventilated ramps, built of steel and concrete, could in event of air attack be used as underground bomb shelters. Its construction virtually completed, the $12,000,000 Douglas plant is now in production, with more than 3,000 men and women already building heavy bomber, attack-bomber, and military transport parts and subassemblies. When in full operation, some 18,000 employees will keep its production lines humming night and day on America's wings of defense.*

Captain Jewel to Stage N.Y. Show

By WILLIAM T. ARTHUR
Council No. 35, AA
Memphis, Tenn.

Well-known to almost every pilot who flies the air lines in this country is Captain Bobbie Jewell, a veteran of the dope and baling wire days of aviation. At that time it perhaps was a mystery to him why airplanes flew, and now in retribution he spends his spare days and nights thinking up means of mystifying all of us here in Memphis. In fact Jewell is the No. 1 Stupefier of Serious Southern Sympathizers!

Slated for First Week in September

Now for the first time his troupe is moving in on the big time up New York way. Bobbie will show his tricks to the public September 6 at the Queensboro theater, 57th Ave., at Queens Blvd., New York City. It will be a showing primarily for the employees of all the air lines in the metropolitan area, but the general public also will be admitted. The Air Line Mechanics Association, sponsor of the gala event, will have charge of the advance ticket sale.

Can Make Mother-in-Law Disappear

All those who have had the pleasure of attending one of the Jewell shows will testify to their openmouthed amazement at the end of the two and one half hour performance. Several years ago the routine was mainly card tricks and petty parlor technique; but now those bits of legerdemain have all but fallen by the wayside to make way for his huge equipment of startling illusions. Bring your mother-in-law, and he will make her disappear — well, for awhile anyway!

U.S. Bombers Superior to Nazi Craft

Dive bombers which out-perform any aircraft of similar type engaged in actual combat in the Nazi drive against Russia, or on any other European war front, are now in quantity production in the United States.

Important Factor in Titanic Struggle

Highly significant in view of the changed methods of warfare in the titanic struggle involving most of the civilized world, this fact was made known for the first time when the War Department authorized release of partial information about the Douglas Aircraft Company's A-24 dive bombers.

This official announcement also disclosed for the first time that plans are already under way to equip one complete Air Force combat group and part of another group with the new bombers. Organization and equipment of these units are in progress.

Army Version Rolling off Assembly Lines

This army version of the Douglas Navy planes, which recently were hailed by aviation experts as American dive bombers which out-Stuka-ed the German Stukas, is now rolling off assembly lines at the El Segundo plant of the Douglas company.

The A-24 is nearly identical to the model SBD-3 Douglas dive bomber, which the company has been delivering to the Navy. Certain adjustments have been made to accommodate Army armament and radio equipment and to adapt the A-24 to land operations instead of carrier operations.

Official War Department Release

Following is the official release from the War Department:

"The War Department announced today that initial deliveries of the A-24, the Army's new dive bomber, have been received by the Air Corps. Preliminary tests indicate the new bomber will outperform dive bombers now in use by foreign nations.

"Plans are under way to equip one complete Air Force combat command group with the new bombers and part of another group. Organization and equipment of these units are now in progress.

"The A-24 is a two-place single motor airplane manufactured by the Douglas Aircraft Company. It is a low-wing, all-metal monoplane with cantilever wing and retractable landing gear. Powered by a Wright P-1820-52 engine, it is equipped with a three-blade propeller.

A-24 Slightly Heavier Than A-17

"The A-24 is comparable in over-all dimensions with the A-17, a light bomber, but is slightly heavier than the A-17.

"Dive bombers are highly specialized airplanes usually employed with tank forces. They have proved effective against moving targets especially when defenses are not thoroughly organized. The pilot, diving his airplane from a high altitude, points the nose toward his target and discharges his bomb load at the lowest point of the dive. Flaps or air brakes are used to slow the airplane at the conclusion of the dive to permit the pilot to aim more accurately and to right his craft for a quick climb.

"Classified as a light bombardment airplane, the A-24 is designed to supplement the Air Corps development of a well-rounded bombardment force to include a sufficient number of all types of airplanes to engage any potential enemy."

Civil Air Regulations — Legislation
Additions - Changes - Amendments

(Continued from Page 7)

in Sec. 04.513(d).

"60.4711—Communication failure. In the event of the failure of two-way communication equipment on such aircraft the pilot shall immediately either leave the airway or descend to an altitude below 3,500 feet above the ground or water."

2. By amending section 60.43 to read as follows:

"60.43—Flight plan. A flight plan is not required unless the flight is made above 3,500 feet above the ground or water within the limits of a civil airway as specified in sec. 60.471."

3. By striking section 60.472.

4. By striking section 60.48 and by striking from the table of contents of Part 60 the following:

"60.48—Flight altitudes."

REGULATION No. 174: AMENDMENT No. 122 TO CAR:
ADOPTED JULY 29, 1941,
EFFECTIVE OCTOBER 1, 1941.

First-Aid Equipment:

This amends Part 61 by the addition of a new section as follows:

"61.340—First-Aid Equipment. No aircraft shall be operated in scheduled air transportation unless equipped with a conveniently accessible first-aid kit adequate for proper first-aid treatment of passengers and crew which shall contain certain medical equipment and supplies approved by the administrator as suitable and sufficient for the type of operation involved."

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RECENT BILLS

H. R. 4987—Introduced by Mr. Barry of N. Y.—Democrat—June 6, 1941.
To create an Aeronautics Department to have jurisdiction over military and civil aviation.

H. R. 5116—Introduced by Mr. Nichols of Okla.—Democrat—June 20, 1941.
Authorizing the advanced training in aeronautics of technical personnel of the Civil Aeronautics Administration.

H. R. 5117—Introduced by Mr. Nichols of Okla.—Democrat—June 20, 1941.
To promote safety in the development of air commerce by regulating the lighting of airports and other landing areas.

H. R. 5119—Introduced by Mr. Nichols of Okla.—Democrat—June 20, 1941.
To provide for the training of air-traffic control-tower operators.

H. R. 5327—Introduced by Mr. Sutphin of N. J.—Democrat—July 15, 1941.
To promote the national defense and preparedness through the creation of a vast reservoir of potential airplane pilots and mechanics, and for other purposes.
This Act to be cited as the "National Youth Glider Pilot Training Act."

S. 1660—Introduced by Senator Smith of S. C.—Democrat—June 26, 1941.
To amend the Railway Labor Act (Section 3, First), approved May 20, 1926, as amended June 21, 1934, and for other purposes.

S. 1703—Introduced by Senator Bridges of N. H.—Republican—June 30, 1941.
Authorizing the President of the United States to award posthumously in the name of Congress a medal of honor to William Mitchell.

S. 1716—Introduced by Senator McCarran of Nev.—Democrat—July 3, 1941.
Authorizing the advanced training in aeronautics of technical personnel of the Civil Aeronautics Administration.

S. 1717—Introduced by Senator McCarran of Nev.—Democrat—July 3, 1941.
To promote safety in the development of air commerce by regulating the lighting of airports and other landing areas.

S. 1718—Introduced by Senator McCarran of Nev.—Democrat—July 3, 1941.
To provide for the training of air-traffic control-tower operators.

S. 1749—Introduced by Senator McCarran of Nev.—Democrat—July 15, 1941.
To promote the national defense and preparedness through the creation of a vast reservoir of potential airplane pilots and mechanics, and for other purposes.
This Act to be cited as the "National Youth Glider Pilot Training Act."

EAL Skipper Jim Farris Completes An Aerial Tour of S. Am. Republic

Tom Hardin, who is on a good will mission for the United States government in South America, embarks from an amphibian on the bank of an unnamed river in a South American jungle.

Farris and Hardin try their hand at archery in an Indian village situated on a jungle river in Bolivia. Farris is flexing the bow, and Hardin is holding reserve ammunition in the form of an arrow.

Part of Farris' tour included a survey of jungle airports in Bolivia. Here the plane is shown making one of such stops.

The crowd gathers at Concepcion, Bolivia to look over the strange new visiting craft that suddenly made its appearance from faraway points.

The altitude at La Paz is 13,403 feet above sea level. Skipper Farris doesn't seem to be affected as he leisurely smokes his pipe.